



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/981,268	10/17/2001	Peter W. Wenzel	14485RRUS01U	6371
49403                      7590                      09/14/2010 GARLICK HARRISON & MARKISON P.O. BOX 160727 AUSTIN, TX 78716-0727				
EXAMINER				
DANIEL JR, WILLIE J				
ART UNIT		PAPER NUMBER		
2617				
NOTIFICATION DATE		DELIVERY MODE		
09/14/2010		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

SMCWHINNIE@TEXASPATENTS.COM

MMURDOCK@TEXASPATENTS.COM

# Office Action Summary

**Application No.**

09/981,268

**Applicant(s)**

WENZEL ET AL.

**Examiner**

WILLIE J. DANIEL JR

**Art Unit**

2617

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 June 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 and 10-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 10-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Informational Statement(s) (PTO/SF/42)
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date: \_\_\_\_\_

### **DETAILED ACTION**

1. This action is in response to applicant's amendment filed on 18 June 2010. **Claims 1-7 and 10-21** are now pending in the present application and **claims 8-9 and 22-23** are canceled.

The BPAI decision mailed on 09 December 2008 has affirmed prior rejection of claims 1-23.

This office action is made **Non-Final**.

### ***Continued Examination Under 37 CFR 1.114***

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 18 June 2010 has been entered.

### ***Information Disclosure Statement***

3. The information disclosure statement(s) (IDS) submitted on

- a. 18 June 2010

is in compliance with the provisions of 37 CFR 1.97 and is being considered by the examiner.

The IDS (see at least item 3a above) included reference document(s) that were lined through (or crossed-out) and have not been considered by the Examiner. Reasons for not considering

the documents are at the least the following:

- i. The IDS failed to comply with 37 CFR 1.98(a)(2)(ii).
- ii. The IDS failed to provide a proper **publication no.** as required by 37 CFR 1.98(b)(4).

### *Claim Objections*

4. **Claims 11 and 15** is objected to because of the following informalities:

- a. Claim 11 is labeled as “Previously Presented” but includes mark-up (i.e., underlining) from a prior amendment (i.e., 06/17/2009) of the claim.
- b. Claim 15 is improperly labeled as “Previously Presented” but the claim includes amended language. The Examiner interprets the claims as --Currently Amended-- and suggests clarifying the claim status.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1, 7, 15, and 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ton (US 2002/0067704 A1)** in view of **Perkins (“IP Mobility Support”)**.

Regarding **claim 1**, Ton discloses a method for registering a subscriber unit (e.g., mobile node MN) upon initial use within a cellular system { (see pg. 2, [0023, 0019]; pg. 3,

[0029, line 3]; Figs. 2-5), where a cellular system incorporating data communications packet switched networks and that deploys several home agents and a subscriber unit or mobile node }, the method comprising:

initially programming addresses for a plurality of home agents in the subscriber unit prior to a registration attempt with a primary home agent to avoid registration failure that precludes the subscriber unit from receiving internet protocol (IP) communications { (see pgs. 2-3, [0023, 0028]; pg. 5, [0060-0062]), wherein the cellular system/network provides a list of home agents attached to a mobile IP reply message (Mobile IP RRP) through which the subscriber unit may register, and subsequently the subscriber unit stores said list of alternate home agents for redundancy support, and to allow continuous mobile IP services in case of failure, and where the subscriber unit can receive an advertisement to be aware of another home agent in addition to the primary home agent that is pre-assigned to the subscriber unit (see pg. 3, [0036, lines 9-12; 0039, lines 3-4]) },

wherein the plurality of home agents includes the primary home agent and a plurality of secondary home agents { (see pgs. 2-3, [0023-0026, 0028]; pg. 4, [0055-0057]; pg. 5, [0060-0062]), wherein the subscriber unit is statically configured to a primary home agent for registration and in case of failure, the network provides a list of secondary home agents through which the subscriber unit may register };

attempting the initial registration with the primary home agent { (see pg. 3, [0036, 0040]; Fig. 1), where the subscriber unit is statically configured to attempt registration with a given #1 home agent (HA1) };

when the subscriber unit fails to achieve registration via the initial registration attempt with the primary home agent of the plurality of home agents { (see pg. 3, [0036, 0040]; pg. 4, [0044]; pg. 6, [0081]), where the subscriber unit is statically configured to attempt registration with a given #1 home agent (HA1) };

the subscriber unit selecting a secondary home agent from the plurality of secondary home agents { (see pg. 3, [0040]), where the mobile node attempting is registration with a primary home agent (HA1), subsequently the network attempting to balance the load between different or secondary home agents, and through the network selecting or choosing a home agent having a lower load },

selecting a secondary home agent from the plurality of secondary home agents { (see pg. 3, [0039-0040]; pg. 5, [0063-0065]; Fig. 1 “steps 150-180”), wherein the subscriber unit selects and attempts registration with a secondary home agent due to failure when attempting registration with a primary home agent }; and

attempting registration with the selected secondary home agent { (see pg. 3, [0040]; pg. 5, [0063-0064]; Fig. 1 “steps 150-180”), wherein the subscriber unit selects and attempts registration with a secondary home agent due to failure when attempting registration with a primary home agent }. Ton does not specifically disclose having the feature(s) programming addresses for a plurality of home agents in the subscriber unit prior to an initial registration attempt. However, the examiner maintains that the feature(s) programming addresses for a plurality of home agents in the subscriber unit prior to an initial registration attempt was well known in the art, as taught by Perkins.

In the same field of endeavor, Perkins discloses the feature(s) programming addresses for a plurality of home agents in the subscriber unit prior to an initial registration attempt { (see pgs. 34-35, section 3.6), where a mobile node (subscriber unit) in a mobile IP communication system can be configured to store IP addresses of one or more home agents (i.e., primary and secondary home agents) for discovering and registration in the system }.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Ton and Perkins to have the feature(s) programming addresses for a plurality of home agents in the subscriber unit prior to an initial registration attempt, in order to efficiently achieving registration, as taught by Perkins.

Regarding **claim 7**, Ton discloses every limitation claimed as applied above in claim 1. Ton does not specifically disclose having the feature wherein a service provider initially programs addresses for a plurality of home agents in the subscriber unit prior to delivery of the subscriber unit to a subscriber. However, the examiner maintains that the feature wherein a service provider initially programs addresses for a plurality of home agents in the subscriber unit prior to delivery of the subscriber unit to a subscriber was well known in the art, as taught by Perkins.

In the same field of endeavor, Perkins clearly discloses having the feature wherein a service provider initially programs addresses for a plurality of home agents in the subscriber unit prior to delivery of the subscriber unit to a subscriber { (see pgs. 34-35, section 3.6), where a mobile node is configured with IP addresses }.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Ton and Perkins to have the feature

wherein a service provider initially programs addresses for a plurality of home agents in the subscriber unit prior to delivery of the subscriber unit to a subscriber, as taught by Perkins, in the method disclosed by Ton for the purpose of efficiently achieving registration.

Regarding **claim 15**, Ton discloses a subscriber unit (e.g., mobile node MN) that operates within a cellular system { (see pg. 3, [0029, lines 1-7]; Figs. 2-5) }, the subscriber unit comprising:

an antenna { (see pg. 1, [0002-0003]), where a mobile terminal that comprises the RF features such as an antenna, a radio frequency, and a digital processor };

a radio frequency unit coupled to the antenna { (see pg. 1, [0002-0003]), where a mobile terminal that comprises the RF features such as an antenna, a radio frequency, and a digital processor }; and

at least one digital processor coupled to the radio frequency unit that executes software instructions { (see pg. 1, [0002-0003]), where a mobile terminal that comprises the RF features such as an antenna, a radio frequency, and a digital processor },

causing the subscriber unit (e.g., mobile node MN) to:

retrieve addresses, stored in the subscriber unit to avoid registration failure that precludes the subscriber unit from receiving internet protocol (IP) communications, for a plurality of home agents in the subscriber unit for an initial registration attempt with a primary home agent { (see pgs. 2-3, [0023, 0028]; pg. 5, [0060-0062]), wherein the cellular system/network provides a list of home agents attached to a mobile IP reply message (Mobile IP RRP) through which the subscriber unit may register, and subsequently the subscriber unit stores said list of alternate home agents for redundancy support, in which that redundancy support

could be handled on a software redundancy implementation, and to allow continuous mobile IP services in case of failure, and where the subscriber unit can receive an advertisement to be aware of another home agent in addition to the primary home agent that is pre-assigned to the subscriber unit (see pg. 3, [0036, lines 9-12; 0039, lines 3-4]) },

wherein the stored addresses for the plurality of home agents includes a primary home agent and a plurality of secondary home agents which have been initially stored prior to the registration attempt { (see pgs. 2-3, [0023-0026, 0028]; pg. 4, [0055-0057]; pg. 5, [0060-0062]), wherein the subscriber unit is statically configured to a primary home agent for registration and in case of failure, the network provides a list of secondary home agents through which the subscriber unit may register };

attempt the initial registration with the primary home agent { (see pg. 3, [0036, 0040]; pg. 4, [0044]; pg. 6, [0081]), where the subscriber unit is statically configured to attempt registration with a given #1 home agent (HA1) };

when failing to achieve registration with the primary home agent via the initial registration attempt { (see pg. 3, [0038-0039]; Fig. 1 “steps 120-140”), wherein the request for registration of the subscriber unit is not completed due to failure of the primary home agent };

selecting a secondary home agent from the plurality of secondary home agents { (see pg. 3, [0040]), where the mobile node is attempting registration with a primary home agent (HA1), subsequently the network attempting to balance the load between different or secondary home agents, and through the network selecting or choosing a home agent having a lower load };

attempt registration with the selected secondary home agent { (see pg. 3, [0040]; pg. 5, [0063-0064]; Fig. 1 “steps 150-180”), wherein the subscriber unit selects and attempts registration with a secondary home agent due to failure when attempting registration with a primary home agent }. Ton does not specifically disclose having the feature(s) wherein the stored addresses for the plurality of home agents includes a primary home agent and a plurality of secondary home agents which have been initially stored prior to the registration attempt. However, the examiner maintains that the feature(s) wherein the stored addresses for the plurality of home agents includes a primary home agent and a plurality of secondary home agents which have been initially stored prior to the registration attempt was well known in the art, as taught by Perkins.

In the same field of endeavor, Perkins discloses the feature(s) wherein the stored addresses for the plurality of home agents includes a primary home agent and a plurality of secondary home agents which have been initially stored prior to the registration attempt { (see pgs. 34-35, section 3.6), where a mobile node (subscriber unit) in a mobile IP communication system can be configured to store IP addresses of one or more home agents (i.e., primary and secondary home agents) for discovering and registration in the system }.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Ton and Perkins to have the feature(s) wherein the stored addresses for the plurality of home agents includes a primary home agent and a plurality of secondary home agents which have been initially stored prior to the registration attempt, in order to efficiently achieving registration, as taught by Perkins.

Regarding **claim 21**, Ton discloses every limitation claimed as applied above in claim 15. Ton does not specifically disclose having the feature wherein a service provider, prior to delivery of the subscriber unit to a subscriber, stores the addresses for the plurality of home agents in the subscriber unit. However, the examiner maintains that the feature wherein a service provider, prior to delivery of the subscriber unit to a subscriber, stores the addresses for the plurality of home agents in the subscriber unit was well known in the art, as taught by Perkins.

In the same field of endeavor, Perkins clearly discloses having the feature wherein a service provider, prior to delivery of the subscriber unit to a subscriber, stores the addresses for the plurality of home agents in the subscriber unit { (see pgs. 34-35, section 3.6), where a mobile node is configured with IP addresses }.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Ton and Perkins to have the feature wherein a service provider, prior to delivery of the subscriber unit to a subscriber, stores the addresses for the plurality of home agents in the subscriber unit, as taught by Perkins, in the method disclosed by Ton for the purpose of efficiently achieving registration.

**Claims 2-3, 10-11, and 16-17** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ton (US 2002/0067704 A1)** in view of **Perkins ("IP Mobility Support")** as applied to claims 1 and 15 above, and further in view of **Troxel et al. (hereinafter Troxel) (US 2002/0078238 A1)**.

Regarding **claim 2**, the combination of Ton and Perkins discloses every limitation claimed, as applied above (see claim 1), in addition Ton further discloses the method of claim 1, further comprising:

rank ordering the plurality of secondary home agents into at least a first secondary home agent and a second secondary home agent { (see pg. 6, [0082]), wherein the plurality of secondary home agents are ranked, so when one registration attempt fails with the current home agent, the next secondary home agent becomes the new primary home agent changing its rank to 1 }. The combination of Ton and Perkins does not specifically disclose having the feature rank ordering the plurality of home agents. However, the examiner maintains that the feature rank ordering the plurality of home agents was well known in the art, as taught by Troxel.

In the same field of endeavor, Troxel discloses the feature rank ordering the plurality of home agents { (see pg. 4, [0051]), wherein a mobile node ranks foreign agents based on several factors such as services and capacity }.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Ton, Perkins, and Troxel to have the feature rank ordering the plurality of home agents, in order to relay and assist network

management decision procedures, thus setting up a faster registration for a particular subscriber, as taught by Troxel.

Regarding **claim 3**, the combination of Ton, Perkins, and Troxel discloses every limitation claimed, as applied above (see claim 2), in addition Ton further discloses the method of claim 2, further comprising:

attempting registration with the first secondary home agent { (see pg. 3, [0036, 0040]; pg. 4, [0044]; pg. 6, [0081]), wherein the subscriber unit attempts registration with an alternate or first secondary home agent (HA2) }; and

when the subscriber unit fails to register with the first secondary home agent { (see pg. 3, [0040]; pg. 5, [0063-0064]; Fig. 1 “steps 150-180”), wherein the subscriber unit selects and attempts registration with a secondary home agent due to failure when attempting registration with a previous home agent },

attempting registration with the second secondary home agent { (see pg. 3, [0036, 0040]; pg. 5, [0063-0064]; Fig. 1 “steps 150-180”), wherein the objective of the invention is to provide alternate home agents in case of failure when attempting registration with a current home agent, subsequently attempting registration if such consecutive failure occurs during the process, therefore the subscriber unit selects and attempts registration with a second secondary home agent due to failure when attempting registration with a previous home agent }.

Regarding **claim 10**, Ton discloses a method for registering a subscriber unit (e.g., mobile node MN) upon initial use within a cellular system { (see [0023, 0019]; pg. 3, [0029, line 3]; Figs. 2-5), where a cellular system incorporating data communications packet

switched networks and that deploys several home agents and a subscriber unit or mobile node }, the method comprising:

initially programming addresses for a plurality of home agents in the subscriber unit prior to a registration attempt with a primary home agent to avoid registration failure that precludes the subscriber unit from receiving internet protocol (IP) communications { (see pgs. 2-3, [0023, 0028]; pg. 5, [0060-0062]), wherein the cellular system/network provides a list of home agents attached to a mobile IP reply message (Mobile IP RRP) through which the subscriber unit may register, and subsequently the subscriber unit stores said list of alternate home agents for redundancy support, in which that redundancy support, and to allow continuous mobile IP services in case of failure, and where the subscriber unit can receive an advertisement to be aware of another home agent in addition to the primary home agent that is pre-assigned to the subscriber unit (see pg. 3, [0036, lines 9-12; 0039, lines 3-4]) },

wherein the plurality of home agents includes the primary home agent and a plurality of secondary home agents { (see pgs. 2-3, [0023-0026, 0028]; pg. 4, [0055-0057]; pg. 5, [0060-0062]), wherein the subscriber unit is statically configured to a primary home agent for registration and in case of failure, the network provides a list of secondary home agents through which the subscriber unit may register };

attempting the initial registration attempt with the primary home agent { (see pg. 3, [0036, 0040]; pg. 4, [0044]; pg. 6, [0081]), where the subscriber unit is statically configured to attempt registration with a given #1 home agent (HA1) };

when the subscriber fails to achieve registration via the initial registration with the primary home agent of the plurality of home agents { (see pg. 3, [0038-0039]; Fig. 1 “steps 120-140”), wherein the request for registration of the subscriber unit is not completed due to failure of the primary home agent };

selecting a first secondary home agent from the plurality of secondary home agents based upon a rank ordering of the plurality of secondary home agents { (see pg. 6, [0082]), wherein the plurality of secondary home agents are ranked, so when one registration attempt fails with the current home agent, the next secondary home agent becomes the new primary home agent changing its rank to 1, and further the subscriber unit selects and attempts registration with a secondary home agent due to failure when attempting registration with a primary home agent (see pg. 3, [0039-0040]; pg. 5, [0063-0065]; Fig. 1 “steps 150-180”) }, and

attempting registration with the selected first secondary home agent { (see pg. 3, [0040]; pg. 5, [0063-0064]; Fig. 1 “steps 150-180”), wherein the subscriber unit selects and attempts registration with a secondary home agent due to failure when attempting registration with a previous home agent }. Ton does not specifically disclose having the feature(s) programming addresses for a plurality of home agents in the subscriber unit prior to an initial registration attempt. However, the examiner maintains that the feature(s) programming addresses for a plurality of home agents in the subscriber unit prior to an initial registration attempt was well known in the art, as taught by Perkins.

In the same field of endeavor, Perkins discloses the feature(s) programming addresses for a plurality of home agents in the subscriber unit prior to an initial registration attempt { (see pgs. 34-35, section 3.6), where a mobile node (subscriber unit) in a mobile IP

communication system can be configured to store IP addresses of one or more home agents (i.e., primary and secondary home agents) for discovering and registration in the system }.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Ton and Perkins to have the feature(s) programming addresses for a plurality of home agents in the subscriber unit prior to an initial registration attempt, in order to efficiently achieving registration, as taught by Perkins. The combination of Ton and Perkins does not specifically disclose having the feature rank ordering the plurality of home agents. However, the examiner maintains that the feature rank ordering the plurality of home agents was well known in the art, as taught by Troxel.

In the same field of endeavor, Troxel discloses the feature rank ordering the plurality of home agents { (see pg. 4, [0051]), wherein a mobile node ranks foreign agents based on several factors such as services and capacity }.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Ton, Perkins, and Troxel to have the feature rank ordering the plurality of home agents, in order to relay and assist network management decision procedures, thus setting up a faster registration for a particular subscriber, as taught by Troxel.

Regarding **claim 11**, the combination of Ton, Perkins, and Troxel discloses every limitation claimed, as applied above (see claim 10), in addition Ton further discloses the method of claim 10, further comprising:

when the subscriber unit fails to achieve registration with the first secondary home agent { (see pg. 3, [0040]; pg. 5, [0063-0064]; Fig. 1 “steps 150-180”), wherein the subscriber unit

selects and attempts registration with a secondary home agent due to failure when attempting registration with a previous home agent },

selecting a second secondary home agent { (see pg. 3, [0039-0040]; pg. 5, [0063-0065]; Fig. 1 “steps 150-180”), wherein the subscriber unit selects and attempts registration with a secondary home agent due to failure when attempting registration with a primary home agent }; and

attempting registration with the second secondary home agent { (see pg. 3, [0036, 0040]; pg. 5, [0063-0064]; Fig. 1 “steps 150-180”), wherein the objective of the invention is to provide alternate home agents in case of failure when attempting registration with a current home agent, subsequently attempting registration if such consecutive failure occurs during the process, therefore the subscriber unit selects and attempts registration with a second secondary home agent due to failure when attempting registration with a previous home agent }.

Regarding **claim 16**, the combination of Ton and Perkins discloses every limitation claimed, as applied above (see claim 15), in addition Ton further discloses the subscriber unit of claim 15, wherein execution of the software instructions further causes the subscriber unit to:

rank ordering the plurality of secondary home agents into at least a first secondary home agent and a second secondary home agent { (see pg. 6, [0082]), wherein the plurality of secondary home agents are ranked, so when one registration attempt fails with the current home agent, the next secondary home agent becomes the new primary home agent changing its rank to 1 }. The combination of Ton and Perkins does not specifically disclose having the

feature the subscriber unit rank ordering the plurality of home agents. However, the examiner maintains that the feature the subscriber unit rank ordering the plurality of home agents was well known in the art, as taught by Troxel.

In the same field of endeavor, Troxel discloses the feature the subscriber unit rank ordering the plurality of home agents { (see pg. 4, [0051]), wherein a mobile node ranks foreign agents based on several factors such as services and capacity }.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Ton, Perkins, and Troxel to have the feature the subscriber unit rank ordering the plurality of home agents, in order to relay and assist network management decision procedures, thus setting up a faster registration for a particular subscriber, as taught by Troxel.

Regarding **claim 17**, the combination of Ton, Perkins, and Troxel discloses every limitation claimed, as applied above (see claim 16), in addition Ton further discloses the subscriber unit of claim 16, wherein execution of the software instructions further causes the subscriber unit to:

attempting registration with the first secondary home agent { (see pg. 3, [0036, 0040]; pg. 4, [0044]; pg. 6, [0081]), wherein the subscriber unit attempts registration with an alternate or first secondary home agent (HA2) }; and

when failing to achieve registration with the first secondary home agent { (see pg. 3, [0040]; pg. 5, [0063-0064]; Fig. 1 “steps 150-180”), wherein the subscriber unit selects and attempts registration with a secondary home agent due to failure when attempting registration with a previous home agent },

attempt registration with the second secondary home agent { (see pg. 3, [0036, 0040]; pg. 5, [0063-0064]; Fig. 1 “steps 150-180”), wherein the objective of the invention is to provide alternate home agents in case of failure when attempting registration with a current home agent, subsequently attempting registration if such consecutive failure occurs during the process, therefore the subscriber unit selects and attempts registration with a second secondary home agent due to failure when attempting registration with a previous home agent }.

**Claims 4 and 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ton (US 2002/0067704 A1)** in view of **Perkins (“IP Mobility Support”)** and further in view of **Troxel et al.** (hereinafter Troxel) (**US 2002/0078238 A1**) as applied to claims 2 and 10 above, and further in view of **Jue et al.** (hereinafter Jue) (**“Design and Analysis of a Replicated Server Architecture for Supporting IP Host Mobility”**) and **Tiedemann et al.** (hereinafter Tiedemann) (**US 6,615,050 B1**).

Regarding **claim 4**, the combination of Ton, Perkins, and Troxel discloses every limitation claimed as applied above in claim 2. The combination of Ton, Perkins, and Troxel does not specifically disclose having the features the subscriber unit generating a random number; and the subscriber unit using the random number to rank order the plurality of secondary home agents. However, the examiner maintains that the features generating a random number; and using the random number to rank order the plurality of secondary home agents was well known in the art, as taught by Jue.

In the same field of endeavor, Jue discloses the features generating a random number; and using the random number to rank order the plurality of secondary home agents { (see pg. 20, cols. 1-2; pg. 21, col. 2; pg. 22, col. 1; pg. 23, col. 1), where a method for randomly selecting home agents for achieving higher load gains }.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Ton, Perkins, Troxel, and Jue to have the features generating a random number; and the subscriber unit using the random number to rank order the plurality of secondary home agents, in order to improve performance when balancing load between home agents during high or irregular traffic volume rate, as taught by Jue. The combination of Ton, Perkins, Troxel, and Jue does not specifically disclose having the feature the subscriber unit generating a random number. However, the examiner maintains that the feature the subscriber unit generating a random number was well known in the art, as taught by Tiedemann.

In the same field of endeavor, Tiedemann discloses the feature the subscriber unit generating a random number { (see col. 4, lines 46-62), wherein a mobile station generates a random number }.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Ton, Perkins, Troxel, Jue, and Tiedemann to have the feature the subscriber unit generating a random number, in order to delay information broadcast at random intervals, thus avoiding collision, as taught by Tiedemann.

Regarding **claim 12**, the combination of Ton, Perkins, and Troxel discloses every limitation claimed as applied above in claim 10. The combination of Ton, Perkins, and Troxel does not specifically disclose having the features the subscriber unit generating a random number; and the subscriber unit using the random number to rank order the plurality of secondary home agents. However, the examiner maintains that the features generating a random number; and using the random number to rank order the plurality of secondary home agents was well known in the art, as taught by Jue.

In the same field of endeavor, Jue discloses the features generating a random number; and using the random number to rank order the plurality of secondary home agents { (see pg. 20, cols. 1-2; pg. 21, col. 2; pg. 22, col. 1; pg. 23, col. 1), where a method for randomly selecting home agents for achieving higher load gains }.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Ton, Perkins, Troxel, and Jue to have the features generating a random number; and the subscriber unit using the random number to rank order the plurality of secondary home agents, in order to improve performance when balancing load between home agents during high or irregular traffic volume rate, as taught by Jue. The combination of Ton, Perkins, Troxel, and Jue does not specifically disclose having the feature the subscriber unit generating a random number. However, the examiner maintains that the feature the subscriber unit generating a random number was well known in the art, as taught by Tiedemann.

In the same field of endeavor, Tiedemann discloses the feature the subscriber unit generating a random number { (see col. 4, lines 46-62), wherein a mobile station generates a random number }.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Ton, Perkins, Troxel, Jue, and Tiedemann to have the feature the subscriber unit generating a random number, in order to delay information broadcast at random intervals, thus avoiding collision, as taught by Tiedemann.

**Claims 5-6 and 13-14** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ton (US 2002/0067704 A1)** in view of **Perkins** (hereinafter Perkins A) ("**IP Mobility Support**") and further in view of **Troxel et al.** (hereinafter Troxel) (**US 2002/0078238 A1**) as applied to claims 2 and 10 above, and further in view of **Perkins** (hereinafter Perkins B) ("**Mobile Networking Through Mobile IP**") and **Fehnel (US 5,590,092)**.

Regarding **claims 5 and 6**, the combination of Ton, Perkins (A), and Troxel discloses every limitation claimed as applied above in claim 2. The combination of Ton, Perkins (A), and Troxel does not specifically disclose having the features the subscriber unit determining a current date; and the subscriber unit using the current date to rank order the plurality of secondary home agents. However, the examiner maintains that the features determining a current date; and using the current date to rank order the plurality of secondary home agents was well known in the art, as taught by Perkins (B).

In the same field of endeavor, Perkins (B) discloses the features determining a current date; and using the current date to rank order the plurality of secondary home agents { (see pg. 62, col. 2 - pg. 63, col. 1), wherein the network employs unique identification fields using timestamps when a subscriber unit is requesting registration with a home agent }.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Ton, Perkins (A), Troxel, and Perkins (B) to have the features determining a current date; and using the current date to rank order the plurality of secondary home agents, in order to secure registration requests by differing each registration from another, as taught by Perkins (B). The combination of Ton, Perkins (A), Troxel, and Perkins (B) does not specifically disclose having the feature the subscriber unit generating a current date or time. However, the examiner maintains that the feature the subscriber unit generating a current date or time was well known in the art, as taught by Fehnel.

In the same field of endeavor, Fehnel discloses the feature the subscriber unit generating a current date or time { (see col. 3, lines 26-39), where a cellular radiotelephone comprises means for generating a current time of day }.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Ton, Perkins (A), Troxel, Perkins (B), and Fehnel to have the feature the subscriber unit generating a current date or time, in order to generate time without the addition of a real time clock chip in the subscriber unit, as taught by Fehnel.

Regarding **claims 13 and 14**, the combination of Ton, Perkins (A), and Troxel discloses every limitation claimed as applied above in claim 10. The combination of Ton, Perkins (A), and Troxel does not specifically disclose having the features the subscriber unit determining a current date; and the subscriber unit using the current date to rank order the plurality of secondary home agents. However, the examiner maintains that the features determining a current date; and using the current date to rank order the plurality of secondary home agents was well known in the art, as taught by Perkins (B).

In the same field of endeavor, Perkins (B) discloses the features determining a current date; and using the current date to rank order the plurality of secondary home agents { (see pg. 62, col. 2 - pg. 63, col. 1), wherein the network employs unique identification fields using timestamps when a subscriber unit is requesting registration with a home agent }.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Ton, Perkins (A), Troxel, and Perkins (B) to have the features determining a current date; and using the current date to rank order the plurality of secondary home agents, in order to secure registration requests by differing each registration from another, as taught by Perkins (B). The combination of Ton, Perkins (A), Troxel, and Perkins (B) does not specifically disclose having the feature the subscriber unit generating a current date or time. However, the examiner maintains that the feature the subscriber unit generating a current date or time was well known in the art, as taught by Fehnel.

In the same field of endeavor, Fehnel discloses the feature the subscriber unit generating a current date or time { (see col. 3, lines 26-39), where a cellular radiotelephone comprises means for generating a current time of day }.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Ton, Perkins (A), Troxel, Perkins (B), and Fehnel to have the feature the subscriber unit generating a current date or time, in order to generate time without the addition of a real time clock chip in the subscriber unit, as taught by Fehnel.

**Claim 18** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Ton (US 2002/0067704 A1)** in view of **Perkins (“IP Mobility Support”)** and further in view of **Troxel et al.** (hereinafter Troxel) (**US 2002/0078238 A1**) as applied to claim 17 above, and further in view of **Jue et al.** (hereinafter Jue) (**“Design and Analysis of a Replicated Server Architecture for Supporting IP Host Mobility”**).

Regarding **claim 18**, the combination of Ton, Perkins, and Troxel discloses every limitation claimed as applied above in claim 17. The combination of Ton, Perkins, and Troxel does not specifically disclose having the features generate a random number; and use the random number to rank order the plurality of secondary home agents. However, the examiner maintains that the features generate a random number; and use the random number to rank order the plurality of secondary home agents was well known in the art, as taught by Jue.

In the same field of endeavor, Jue discloses the features generate a random number; and use the random number to rank order the plurality of secondary home agents { (see pg. 20, cols. 1-2; pg. 21, col. 2; pg. 22, col. 1; pg. 23, col. 1), where a method for randomly selecting home agents for achieving higher load gains }.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Ton, Perkins, Troxel, and Jue to have the features generate a random number; and use the random number to rank order the plurality of secondary home agents, in order to improve performance when balancing load between home agents during high or irregular traffic volume rate, as taught by Jue.

**Claims 19 and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ton (US 2002/0067704 A1)** in view of **Perkins** (hereinafter Perkins A) ("**IP Mobility Support**") and further in view of **Troxel et al.** (hereinafter Troxel) (**US 2002/0078238 A1**) as applied to claim 17 above, and further in view of **Perkins** (hereinafter Perkins B) ("**Mobile Networking Through Mobile IP**").

Regarding **claims 19 and 20**, the combination of Ton, Perkins (A), and Troxel discloses every limitation claimed as applied above in claim 17. The combination of Ton, Perkins (A), and Troxel does not specifically disclose having the features the subscriber unit determining a current date; and the subscriber unit using the current date to rank order the plurality of secondary home agents. However, the examiner maintains that the features determining a current date; and using the current date to rank order the plurality of secondary home agents was well known in the art, as taught by Perkins (B).

In the same field of endeavor, Perkins (B) discloses the features determining a current date; and using the current date to rank order the plurality of secondary home agents { (see pg. 62, col. 2 - pg. 63, col. 1), wherein the network employs unique identification fields using timestamps when a subscriber unit is requesting registration with a home agent }.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Ton, Perkins (A), Troxel, and Perkins (B) to have the features determining a current date; and using the current date to rank order the plurality of secondary home agents, in order to secure registration requests by differing each registration from another, as taught by Perkins (B).

***Response to Arguments***

6. Applicant's arguments with respect to claims 1, 10, and 15 have been considered but are moot in view of the new ground(s) of rejection necessitated by the amended language and/or new limitations.

In response to applicant's arguments, the Examiner respectfully disagrees as the applied reference(s) provide more than adequate support and to further clarify (see the above claims for relevant citations).

7. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Regarding applicant's argument of claim 1 on pg. 9, 5<sup>th</sup> full par., "...do not teach...initial programming or storage of a plurality of home agents in a subscriber unit prior to an initial registration attempt..." (also, see pg. 11, item B-2); and on pg. 11, 4<sup>th</sup> full par., "...not the home agent of the cellular system..."; and on pg. 12, item 2-B-b, "...does not recite a failed initial registration of a subscriber unit...", the Examiner respectfully disagrees. Applicant has failed to interpret and appreciate the combined teachings of well-known prior art Ton and Perkins that clearly discloses the claimed feature(s) as would be clearly recognized by one of ordinary skill in the art. In particular, Ton discloses the language as related to the claimed feature(s)

initially programming addresses for a plurality of home agents in the subscriber unit prior to an initial registration attempt with a primary home agent { (see pgs. 2-3, [0023, 0028]; pg.

5, [0060-0062]), wherein the cellular system/network provides a list of home agents attached to a mobile IP reply message (Mobile IP RRP) through which the subscriber unit may register, and subsequently the subscriber unit stores said list of alternate home agents for redundancy support, and to allow continuous mobile IP services in case of failure, and where the subscriber unit can receive an advertisement to be aware of another home agent in addition to the primary home agent that is pre-assigned to the subscriber unit (see pg. 3, [0036, lines 9-12; 0039, lines 3-4]) };

registering a subscriber unit (e.g., mobile node MN) upon initial use within a cellular system { (see pg. 2, [0023, 0019]; pg. 3, [0029, line 3]; Figs. 2-5), where a cellular system incorporating data communications packet switched networks and that deploys several home agents and a subscriber unit or mobile node };

the subscriber fails to achieve registration via the initial registration with the primary home agent of the plurality of home agents { (see pg. 3, [0038-0039]; Fig. 1 “steps 120-140”), wherein the request for registration of the subscriber unit is not completed due to failure of the primary home agent }. As a note, see Ton - pg. 1, [0004, lines 1-5]. As further support in the same field of endeavor, Perkins discloses the language as related to the claimed feature(s) programming addresses for a plurality of home agents in the subscriber unit prior to an initial registration attempt { (see pgs. 34-35, section 3.6), where a mobile node (subscriber unit) in a mobile IP communication system can be configured to store IP addresses of one or more home agents (i.e., primary and secondary home agents) for discovering and registration in the system }. Therefore, the combination(s) of the

reference(s) Ton and Perkins as addressed above more than adequately meets the claim limitations.

8. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "...does not recite a failed attachment..." - see pg. 10, 5<sup>th</sup> full par.) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Regarding applicant's argument of claim(s) 1 (see above), the applicant's argument relies on a feature not recited in the claim.

9. Regarding applicant's comment(s) of claims 2-7 and 10-21, the claims are addressed for the same reasons as set forth above and as applied above in each claim rejection.

### ***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILLIE J. DANIEL JR whose telephone number is (571)272-7907. The examiner can normally be reached on 8:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Appiah can be reached on (571) 272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Willie J. Daniel, Jr./  
Examiner, Art Unit 2617

WJD,Jr  
08 September 2010